

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A laser irradiation method comprising:

changing a first laser beam emitted from a solid-state laser oscillator which oscillates a laser beam having a spectral width which is 0.1 nm or more into a second laser beam whose intensity distribution is homogenized by passing through a beam homogenizer;

making the second laser beam pass through a [[first]] condensing lens and a second-condensing-lens after passing through the beam homogenizer;

making the second laser beam enter an irradiation surface; and

moving the second laser beam relative to the irradiation surface so as to form a crystal grain grown continuously in a moving direction;

wherein the solid-state laser oscillator includes a crystal of ceramic doped with Yb.

2. (Currently Amended) A laser irradiation method comprising:

changing a first mode-locked pulsed laser beam emitted from a solid-state laser oscillator which oscillates a laser beam having a spectral width which is 0.1 nm or more into a second laser beam whose intensity distribution is homogenized by passing through a beam homogenizer;

changing making the second laser beam into a third laser beam by condensing the second-laser-beam-on-a-plane by using pass through a [[first]] condensing lens after passing through the beam homogenizer;

making the [[third]] second laser beam enter an irradiation surface through a second-condensing-lens; and

moving the [[third]] second laser beam relative to the irradiation surface,  
wherein the second condensing lens is disposed at a position where the plane  
and the irradiation surface are in a conjugate relation, and  
wherein the solid-state laser oscillator includes a crystal of ceramic doped with  
Yb.

3. (Currently Amended) A laser irradiation method comprising:

changing a first laser beam emitted from a solid-state laser oscillator which  
oscillates a laser beam having a spectral width which is 0.1 nm or more into a second  
laser beam whose intensity distribution is homogenized by passing through a beam  
homogenizer;

changing the second laser beam into a third laser beam by using a slit to block  
an end portion of the second laser beam;

making the third laser beam pass through a condensing lens and a projecting  
lens so that an image of the third laser beam formed by the slit is projected onto an  
irradiation surface; and

moving the irradiation surface relative to the third laser beam so as to form a  
crystal grain grown continuously in a moving direction,

wherein the projecting lens is disposed at a position where the slit and the  
irradiation surface are in a conjugate relation[[, and]]

wherein the solid-state laser oscillator includes a crystal of ceramic doped with  
Yb.

4. (Original) The laser irradiation method according to any one of Claims 1 to 3,  
wherein the condensing lens is a convex cylindrical lens or a convex spherical  
lens.

5. (Currently Amended) The laser irradiation method according to any one of

Claims 1 to 3,

wherein the solid-state laser oscillator is a solid-state laser oscillator which includes a crystal of sapphire, YAG, ceramic YAG, ceramic Y<sub>2</sub>O<sub>3</sub>, KGW, KYW, Mg<sub>2</sub>SiO<sub>4</sub>, YLF, YVO<sub>4</sub>, or GdVO<sub>4</sub> the crystal of ceramic YAG or ceramic Y<sub>2</sub>O<sub>3</sub> doped with at least one of Nd, Yb, Cr, Ti, Ho, and Er.

6. (Previously Presented) The laser irradiation method according to any one of Claims 1 to 3,

wherein the laser beam is converted by a non-linear optical element.

7. (Previously Presented) The laser irradiation method according to any one of Claims 1 to 3,

wherein the beam homogenizer uses any one of a cylindrical lens array, a light pipe, and a fly-eye lens.

8. (Previously Presented) A digital video camera, a digital camera, a navigation system, a sound reproduction device, a display, a mobile terminal, a thin film integrated circuit device, or a CPU manufactured by using the laser irradiation method according to any one of Claims 1 to 3.

9. (Currently Amended) A laser irradiation apparatus comprising:

a solid-state laser oscillator for oscillating a laser beam having a spectral width which is 0.1 nm or more;

a beam homogenizer for homogenizing intensity distribution of the laser beam emitted from the solid-state laser oscillator;

a [[first]] condensing lens for condensing the laser beam which has passed through the beam homogenizer; and

~~a second condensing lens for condensing the laser beam which has passed through the first condensing lens; and~~

means for moving an irradiation surface of the laser beam relative to the laser beam so as to form a crystal grain grown continuously in a moving direction;

~~wherein the solid-state laser oscillator includes a crystal of ceramic doped with Yb.~~

10. (Currently Amended) A laser irradiation apparatus comprising:

a solid-state laser oscillator for oscillating a mode-locked pulsed laser beam having a spectral width which is 0.1 nm or more;

a beam homogenizer for homogenizing intensity distribution of the mode-locked pulsed laser beam emitted from the solid-state laser oscillator;

a condensing lens for condensing the mode-locked pulsed laser beam which has passed through the beam homogenizer on a plane; and

means for moving an irradiation surface relative to the laser beam;

~~wherein the condensing lens is disposed at a position where the plane and the irradiation surface are in a conjugate relation, and~~

~~wherein the solid-state laser oscillator includes a crystal of ceramic doped with Yb.~~

11. (Currently Amended) A laser irradiation apparatus comprising:

a solid-state laser oscillator for oscillating a laser beam having a spectral width which is 0.1 nm or more;

a beam homogenizer for homogenizing intensity distribution of the laser beam emitted from the solid-state laser oscillator;

a slit for blocking an end portion of the laser beam whose intensity distribution has been homogenized by the beam homogenizer;

a condensing lens for condensing the laser beam;

a projecting lens for projecting an image of the laser beam formed by the slit onto an irradiation surface; and

means for moving the irradiation surface relative to the laser beam so as to form a crystal grain grown continuously in a moving direction, and

wherein the projecting lens is disposed at a position where the slit and the irradiation surface are in a conjugate relation[, and]]

wherein the solid-state laser oscillator includes a crystal of ceramic doped with Yb.

12. (Original) The laser irradiation apparatus according to Claim 10 or 11,

wherein the condensing lens is a convex cylindrical lens or a convex spherical lens.

13. (Currently Amended) The laser irradiation apparatus according to any one of Claims 9 to 11,

wherein the solid-state laser oscillator is a solid-state laser oscillator which includes a crystal of sapphire, YAG, ceramic YAG, ceramic  $Y_2O_3$ , KGW, KYW,  $Mg_2SiO_4$ , YLF,  $YVO_4$ , or  $GdVO_4$  the crystal of ceramic YAG or ceramic  $Y_2O_3$  doped with at least one of Nd, Yb, Cr, Ti, Ho, and Er.

14. (Previously Presented) The laser irradiation apparatus according to any one of Claims 9 to 11,

wherein the laser beam is a harmonic converted by a non-linear optical element.

15. (Previously Presented) The laser irradiation apparatus according to any one of Claims 9 to 11,

wherein the beam homogenizer is any one of a cylindrical lens array, a light pipe, and a fly-eye lens.

16. (Previously Presented) A digital video camera, a digital camera, a navigation system, a sound reproduction device, a display, a mobile terminal, a thin film integrated circuit device, or a CPU manufactured by using the laser irradiation apparatus according to any one of Claims 9 to 11.

17. (Previously Presented) The laser irradiation method according to claim 1, wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.

18. (Previously Presented) The laser irradiation method according to claim 2, wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.

19. (Previously Presented) The laser irradiation method according to claim 3, wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.

20. (Previously Presented) The laser irradiation apparatus according to claim 9, wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.

21. (Previously Presented) The laser irradiation apparatus according to claim 10, wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.

22. (Previously Presented) The laser irradiation apparatus according to claim 11,

wherein a fundamental wavelength is converted into harmonic in the solid-state laser oscillator.